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INTERNATIONAL
DEVELOPMENTS

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Australian Council for Educational Research

The Australian Council for Educational Research (ACER) is one of the world's leading educational research centres.

Our goal is to support every learner, every learning professional, every learning institution and our learning society through our work.

ACER has built a strong reputation as a provider of reliable support and expertise to education policymakers and professional practitioners since it was established in 1930.

As a not-for-profit organisation, independent of government, ACER receives no direct financial support and generates its entire income through contracted research and development projects, and through products and services that it develops and distributes.

ACER has experienced significant growth in recent years and now has more than 400 staff located in offices in Melbourne, Sydney, Brisbane, Perth, Adelaide, Dubai, Jakarta, London and New Delhi who are working on education projects across the world.

ACER provides research and assessment services, consultancy, support and professional development programs to governments and educational organisations in numerous countries. In addition, ACER develops, implements and evaluates regional,

national and international assessment programs for a broad range of international clients. ACER has been engaged in significant collaborative work with the Organisation for Economic Cooperation and Development (OECD) as the leading partner in a consortium responsible for the Programme for International Student Assessment (PISA).

ACER has official partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO). ACER collaborates with UNESCO through the UNESCO Institute for Statistics and the UNESCO Office in Bangkok on a variety of initiatives, including the development of empirically supported learning assessments for reading and mathematics, and associated tools and methodologies, that countries can use to effectively and appropriately monitor learning outcomes to inform educational policy.

ACER also collaborates on a number of international development projects with organisations such as UNICEF, the World Bank, the Australian Department of Foreign Affairs and Trade, and the United Kingdom Department for International Development,

contributing to educational evaluation and reform in a number of countries. Further, ACER is the International Study Centre responsible for the IEA International Civic and Citizenship Education Study and International Computer and Information Literacy Study, and jointly conducts the IEA Teacher Education Development Study with Michigan State University.

ACER through its Centre for Global Education Monitoring (GEM) is tracking progress in the provision and quality of schooling through the systematic and strategic collection of data on educational outcomes, and factors that influence these. GEM aims to support improved policies, programs and practices in education and, ultimately, improved educational progress for all learners.

ACER through its education and development program also supports Ministries of Education within the development sector to improve student learning. ACER's education and development research program focuses on conducting and supporting research that aims to improve student learning in the development context.

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Cooperation is vital

Working together to
improve learning



Richa Jain is Manager, International Development at the Australian Council for Educational Research.



Cooperation between key international education organisations is helping education systems to understand the impact of education reforms, and compare the achievement of their students with other participating countries and economies, as **Richa Jain** explains.

The role of ACER's international work on education monitoring, assessment and evaluation has never been more important. ACER has, for many decades, worked extensively in designing and delivering technically rigorous assessment programs around the world. The experience of working in a variety of contexts has equipped ACER with the substantial understanding and expertise required to deliver assessment programs suitable in global, regional and national contexts.

Following years of cooperative work in global education monitoring, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and ACER formalised a partnership in research on learning assessment. This reflects our shared interest in promoting the ideal of quality learning for all. The two organisations will continue to work together to produce common, coordinated and sustainable learning assessments across the world.

The partners are currently developing a global measurement scale for describing and quantifying student progress in reading and mathematics to measure progress towards the Sustainable Development Goals and other improvements in education.

Simultaneously on a regional level, ACER is collaborating with the United Nations International Children's Emergency Fund and the Southeast Asian Ministers of Education Organization to develop the Southeast Asia Primary Learning Metrics (SEA-PLM).

SEA-PLM is a regional assessment to measure the performance of Year 5 children in reading, writing, maths and global citizenship in the education systems of member countries of the Association of Southeast Asian Nations.

ACER is also conducting an analysis of existing assessments to understand how they can best meet the needs of educational systems in developing countries.

ACER has undertaken a study commissioned by the Organisation for Economic Cooperation and

Development and the World Bank to review major international, regional and national learning assessments to identify the key requirements to ensure these assessments enable the measurement of education quality in developing countries.

ACER's growing international work has prompted expansion in the organisation's capacity. As ACER's global operation grows, the organisation continues to expand its facilities and staffing in India, Indonesia, the United Arab Emirates and the United Kingdom.

In this issue

In this issue of *International Developments* we explore collaborative efforts by ACER and the UNESCO Institute for Statistics to develop a global scale that benchmarks student performance in reading and mathematics against a common measure. This project aims to support global efforts to meet the fourth goal of the United Nations Sustainable Development Goals – to ensure inclusive and quality education for all and promote lifelong learning – by 2030. We also report on analysis of assessments around the world to identify how best to operate large-scale assessments in developing countries.

This issue of *International Developments* also looks at ACER's work on the development of an internal monitoring and evaluation system of citizen-led assessment in Mali; research investigating preschool education for children in the Philippines; an audit of the curriculum materials of 11 Southeast Asian countries to inform the development of a regional assessment framework; analysis for UNICEF of the major impediments to children's learning in Eastern and Southern African schools; and research on the relationship between school-related factors and achievement outcomes for students in Afghanistan. ■



Professor Ray Adams is the Director of ACER's Centre for Global Education Monitoring and a Professorial Fellow of the University of Melbourne, specialising in psychometrics, educational statistics, large-scale testing and international comparative studies.



Working with UIS towards a global measurement scale for learning

Collaborative efforts are underway to develop a global scale that benchmarks student performance in reading and mathematics against a common measure. **Ray Adams** reports on progress.

ACER through the Centre for Global Education Monitoring (GEM), and the UNESCO Institute for Statistics (UIS) are collaborating to support global efforts to meet the fourth of the United Nations Sustainable Development Goals (SDG4) – ‘Ensure inclusive and quality education for all and promote lifelong learning opportunities for all’ – by 2030. Through their collaboration, the partners are developing tools, methods and approaches to obtain globally comparable measures of learning outcomes and to strengthen the capacity of countries to monitor learning.

The core of their work is the common learning metrics to describe and quantify learning progress in reading and mathematics. Such common metrics will be useful for learning assessment, but also to guide teacher development priorities, curriculum reform and the setting of national standards.

Describing and quantifying learning progress

The approach adopted by ACER and the UIS to develop the common metrics has been to draw on existing test items from multiple assessments implemented in a range of educational settings across the world, including:

- the OECD’s Programme for International Student Assessment
- the IEA’s Trends in International Mathematics and Science Study and Progress in International Reading Literacy Study
- the Analysis Programme of the CONFEMEN Education Systems
- the Latin American Laboratory for Assessment of the Quality of Education
- the Southern and Eastern Africa Consortium for Monitoring Educational Quality
- the Southeast Asia Primary Learning Metric and
- the Pacific Islands Literacy and Numeracy Assessment.

Analysis of items and empirical data from this range of assessments indicates that robust common metrics can be built.

Using empirical data to order items by increasing level of difficulty, and drawing upon theories of how skills, knowledge and understandings develop, ACER and the UIS have now drafted summary descriptions of learning progress for reading and mathematics.

These summary descriptions can be associated with defined points along numerical measurement scales, and together the numerical scales and associated summary descriptions make up the common metrics.

Validating and using the common metrics

One of the next steps will be to establish how results from different assessments relate to the common metrics. This will not only validate the metrics, but also serve as the foundation for the tools and methods that will yield fit-for-purpose international comparability of learning outcomes without imposing on countries universal measurement processes that may be inappropriate or unsuited to local contexts.

A further step will be to consult and negotiate with various stakeholders to agree on locations on the common metrics that define ‘minimum proficiency’ for learners at several different stages of learning. These agreed locations will become the benchmarks that will give shared meaning to one of the key indicators for SDG4, Indicator 4.1.1:

‘Percentage of children/young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency levels in (i) reading and (ii) mathematics.’

Calling for your expert input and feedback

Before ACER and the UIS embark on the next steps, they are seeking expert input and feedback on the draft common metrics.

The draft versions of the common metrics for reading and mathematics will be available for download from the ACER website. They will be packaged in a prototype of the ‘Learning Progression Explorer’, an online tool ACER is developing to enable education stakeholders to study and explore the concept of learning progressions, of which the common metrics are examples. Visitors will be invited to register their interest in providing expert input and feedback, and will be advised as soon as the common metrics are available.

An initial version of common metrics for reading was unveiled in the prototype ‘Learning Progression Explorer’ at the second meeting of the Global Alliance for Monitoring Learning in Washington DC in October 2016.

To register your interest in providing expert input and feedback on the draft common metrics for reading and mathematics, visit the ACER GEM Centre at www.acer.org/gem/learning-progression-explorer You will be notified when the drafts are available. ■

LINKS

Read more about ACER’s GEM research at www.acer.edu.au/gem

Read more about the UIS at www.uis.unesco.org/education

Read more on the United Nations Sustainable Development Goals at www.un.org/sustainabledevelopment/education



Studying early childhood education in the Philippines

A recent ACER research report highlights the importance of preschool education for children in the Philippines. **Amanda Taylor** explains.



Amanda Taylor is a Research Officer in ACER's Education and Development program.

The Philippines Early Childhood Care and Development (ECCD) Longitudinal Study is a four-year study that began in October 2014. The aim of the study is to provide evidence to guide implementation of the Philippines' *Early Years Act of 2013*.

Given recent reforms of the education system, extending it from a 10-year system to a 13-year Foundation to Year 12 system, this study aims to better understand the relationship between early years education and school performance for the purpose of informing policy.

Key findings

The first report of the study, released in May 2016, examined the results of the first of four assessment rounds, which measured the cognitive, social and emotional, and oral language skills of children at the commencement of their first year of school.

The report revealed that students who attended a preschool program performed better across all three domains than those who did not. Accordingly, even in general terms, without collecting and analysing data on the duration or type of preschool program attended, it appears that attending preschool makes a positive difference within the sample. This supports current interventions and the government's policy related to investing in early years education as outlined in the *Early Years Act of 2013*.

The report also found that students from conflict-affected areas performed at a lower level across all three domains than any other variable group analysed as part of this baseline report, which puts them far behind at the beginning of their schooling. Accordingly, these results

suggest they require more support and are at greater risk of failure than any other group in this study. Their progress and development in future assessment rounds is critical to track.

A strong relationship was found between social and emotional skills, and cognitive skills (achievement in literacy and mathematics) at the commencement of school. These results support the emphasis placed on the development of social and emotional skills as an integral part of the Philippines Department of Education K–12 Curriculum.

About the study

Funded by UNICEF and the Australian Government through the Department of Foreign Affairs and Trade, the ECCD Longitudinal Study is implemented by ACER with the Southeast Asian Ministers of Education Organisation through its Regional Centre for Educational Innovation and Technology (SEAMEO INNOTECH) and the Assessment, Curriculum and Technology Research Centre (ACTRC) of the University of Melbourne and the University of the Philippines.

The study follows a cohort of 4500 students from the commencement of Kindergarten through to Year 2. Students were selected from a range of contexts and backgrounds across the three main island groups of the Philippines, including children of different language backgrounds and geographic locations.

Using both quantitative and qualitative approaches, evidence regarding children's social, emotional, cognitive and oral language skills in English and Filipino on four occasions between 2014 and 2018 is being collected. This study

will measure growth and development over the period, year on year, targeting a range of settings to shed light on how skills develop in diverse contexts.

ACER has designed the research methodology, and developed survey and test instruments; and will analyse, interpret and workshop the results with UNICEF and the Department of Education in the Philippines. The ACER staff working on this project are Rachel Parker, Prue Anderson, Eveline Gebhardt, Jorge Fallas and Amanda Taylor.

The final longitudinal report will be presented following the conclusions of the final round of assessments in 2018. With another three assessment rounds to report, the study will be looking at the growth of students as they transition from Kindergarten through to Years 1 and 2. ■

LINKS

Read more about ACER's education and development program at www.acer.edu.au/research/areas-of-research/education-and-development

Curriculum audit informs development of a regional assessment framework

The results of an audit of curriculum materials of 11 Southeast Asian countries have informed the development of a regional assessment framework, as **Jeaniene Spink** explains.



Jeaniene Spink is the Research Director for ACER's Educational and Development Research program.

The regional assessment framework for 11 members of the Association of Southeast Asian Nations – Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste and Vietnam – outlines the skills and expertise the Southeast Asia Primary Learning Metric (SEA-PLM) will measure to help governments understand learning achievement in their schools.

The SEA-PLM – a collaboration between the Southeast Asian Ministers of Education Organization, UNICEF and ACER – is a regional assessment to

measure the performance of Year 5 children in four domains (reading, writing, maths and global citizenship) in the education systems of member countries of the Association of Southeast Asian Nations (ASEAN).

The SEA-PLM will aim to:

- help partner governments better measure and understand the status of learning achievement across the ASEAN region
- strengthen the capability and capacity of national examination and assessment staff, while building a critical pool of expertise in the region, and





The overarching curriculum goal across ASEAN countries is that education should produce citizens who are able to deal with challenges and solve the kinds of problems they are likely to confront throughout their lives.

- support collaboration on the development of learning assessments and standards across the education systems of the member countries of ASEAN.

Prior to developing the framework for the SEA-PLM, an audit of the curriculum materials of the 11 ASEAN countries was undertaken to identify similarities and differences in the curriculum frameworks in each country.

The audit examined statements about the overarching orientation of education in each country, and then focused on the details of the curriculum for Year 5.

The curriculum audit reveals significant diversity between ASEAN countries in the way they define their schools' curriculum requirements and their broad learning goals. This strongly indicates differing priorities in particular countries.

Nevertheless, the audit also reveals significant overlap and similarity across curriculum statements.

The overarching curriculum goal across ASEAN countries is that education should produce citizens who are able to deal with challenges and solve the kinds of problems they are likely to confront throughout their lives.

This concern with the practical application of students' skills, knowledge and understanding in everyday contexts is the orientation of the framework, and is the basis from which the SEA-PLM initiative is built. ■

LINKS

Read more about ACER's education and development program at www.acer.edu.au/research/areas-of-research/education-and-development

Read the Southeast Asia Primary Learning Metrics: Audit of curricula report at www.acer.edu.au/files/SEA-PLM_Curriculum_Audit_2016.pdf

In Africa, many are in school but not learning



Ursula Schwantner is a Research Fellow in ACER's Assessment and Psychometric Research program.

ACER analysis for UNICEF examines the major impediments to children's learning as a considerable proportion of students in Eastern and Southern African schools do not reach expected basic learning benchmarks in numeracy and literacy.

Ursula Schwantner reports.

The analysis, published in *Improving Quality Education and Children's Learning Outcomes and Effective Practices in the Eastern and Southern Africa Region*, compares existing learning assessments in Eastern and Southern Africa, and explores how education data are used in education policy and practice to improve children's learning outcomes in the region.

Learning assessments

The report contrasts 58 learning assessments targeting students in primary education in 23 countries. With the majority of these assessments aimed at system-level monitoring, it is essential that assessments be undertaken periodically, and that competency levels and benchmarks be defined to measure learning growth.

In addition to performance data, the relationships between background characteristics and performance need to be understood to identify factors and strategies relevant to change and improvement of learning outcomes. Based on this information, measures can be established to address specific learner needs at each level, for example, developing instructional strategies or identifying areas for professional training.

Although more than half of the assessments in this study report results with reference to competency levels or benchmarks, and almost all of the assessments collect contextual data of some kind from students, teachers and school principals, the limited data that were available for analysis posed challenges for characterising children with limited learning outcomes.

Another challenge in quantifying the number of children experiencing limited learning outcomes is that different assessment programs use different metrics to measure achievement and set different benchmarks for ‘acceptable’ learning outcomes. Hence there is no consistency or clear standard among assessment programs in estimating the proportion of children who are not meeting minimum levels of learning proficiency. This highlights the importance of the development of common learning metrics for literacy and numeracy based on international and regional benchmarks for achievement results.

Affecting learning outcomes

Average test scores for literacy and numeracy are low in Eastern and Southern Africa. For example, in Zambia and Malawi, only 27 per cent of students have achieved basic reading skills by Year 6. In mathematics, the proportion of primary students with basic skills is even lower, with fewer than 50 per cent of students in Year 6 achieving the minimum level in two-thirds of the countries in the region.

The report reveals that both gender and age tend to be strongly related to learning outcomes among Eastern and Southern African students. Girls generally outperformed boys in reading literacy, while boys outperformed girls in mathematics. Students who were relatively younger than the median class age tended to be less likely to be experiencing limited learning outcomes. For example, Year 6 students in Botswana who were aged 12 years or younger were almost three times less likely to be experiencing limited learning outcomes in mathematics than students who were more than 12 years old. However, the relationships between age and performance are complex and may be determined by different socioeconomic and demographic factors.

Consistent with other studies in the region, socioeconomic factors are a strong predictor of achievement.

Students from lower socioeconomic backgrounds were more likely to experience limited learning outcomes throughout the region in both literacy and numeracy. Among other factors, household possessions, including the availability of reading materials and books in the home, and levels of parental education, were also found to be associated with lower learning outcomes.

Students who had limited exposure to a learning environment in the home were disadvantaged in performance at school. Positive learning outcomes were far more likely in homes where students:

- were involved in reading and storytelling
- were not required to work outside of the home
- started school early
- were provided with adequate support in school by their teachers to build foundational literacy skills, and
- attended schools that had relevant and engaging reading and learning materials in buildings with clean water and sanitation.

Improving learning outcomes

The report identified a number of strategies that contribute to the success of country-level practices in Eastern and Southern Africa.

Ten programs in seven countries were identified as having had an impact on student learning in early grade literacy and numeracy. These successful programs comprised assessments, teacher training and community support for children’s reading.

The successful programs provide a combination of:

- well-targeted instructional interventions
- regular professional development of teachers through school-level training and coaching with regular system-level follow up and support
- sufficient relevant and quality classroom materials, and

- more literacy and numeracy instructional time.

Overall, the study found that key strategies for improving the learning outcomes of disadvantaged children share two common features: a holistic and coherent approach, and consistent and continuous support over time.

Synthesising the main findings from this study, a macro theory of change was developed, anchored in the ‘three As’ approach (assessment, analysis and action) and aimed at initiating a long-term and sustainable improvement in student performance. This approach reveals the importance of knowing where students are at in their learning and how performance progresses over time so that effective targeted interventions can be developed and integrated into education reform agendas. ■

Further information

Improving Quality Education and Children’s Learning Outcomes and Effective Practices in the Eastern and Southern Africa Region by Tim Friedman, Ursula Schwantner, Jeaniene Spink, Naoko Tabata and Charlotte Waters is published by the UNICEF Eastern and Southern Africa Regional Office.

LINKS

Read more about ACER’s education and development program at www.acer.edu.au/research/areas-of-research/education-and-development

Read more about ACER’s GEM research at www.acer.edu.au/gem

Read *Improving Quality Education and Children’s Learning Outcomes and Effective Practices in the Eastern and Southern Africa Region* at http://research.acer.edu.au/monitoring_learning/25

In Afghanistan, **teachers matter**

Students in well-resourced schools in Afghanistan are more likely to have stronger learning outcomes and one of the most important resources is good teachers. **Tim Friedman** reports.



Dr Tim Friedman is a Research Fellow in ACER's International Surveys research program.

A new ACER report on the relationship between school-related factors and achievement outcomes for students in Afghanistan has found that the supply of appropriately trained teachers and physical infrastructure is associated with improved outcomes for students.

The report, *Class 6 School Factors in Afghanistan 2013*, investigates results for Class 6 students from the 2013 Monitoring Trends in Educational Growth (MTEG) program in light of a school questionnaire designed to collect key information from school principals on the characteristics of teachers and schools as well as on school policies and resources.

While the results show that well-resourced schools are associated with higher student achievement, many of the differences observed in student achievement can be explained by the fact that students in such schools tend to come from families that have access to greater resources.

Teachers matter more

Nevertheless, supplying improved physical infrastructure would be expected to improve the learning environment for students. The provision of basic infrastructure such as electricity, water, telecommunications and the like, and an adequate supply of textbooks, is associated with improved student achievement outcomes. Of greater importance, arguably, is the need for the provision of trained and motivated teachers.

According to the report authors, a focus on improving teacher quality may have a greater effect on improving student outcomes than increased physical resources.

Resources in the school and home

- Students attending schools in urban settings have higher levels of achievement in reading and writing literacy than students from non-urban settings.
- The greater the distance a student's school from community facilities, especially shopping centres or marketplaces, the more likely that the student will have lower achievement in reading or writing.

A focus on improving teacher quality may have a greater effect on improving student outcomes than increased physical resources

- Students taught in the language they speak at home are more likely to perform better in writing, but not in reading or mathematics.
- Students who have access to their own textbooks perform better in writing, reading and mathematics than students who share textbooks.
- Students who attend schools with a greater proportion of teachers with a university education are more likely to perform better in reading, and students attending schools with a greater proportion of teachers having recently undertaken professional development are more likely to perform better in writing.

While the report findings help in describing the context in which Class 6 students in Afghanistan are learning, its main finding is that student achievement is largely attributable to the degree of resourcing available both in the student's school and at home. ■

Further information

Class 6 School Factors in Afghanistan 2013: The relationship between school factors and student outcomes from a learning assessment of mathematical, reading and writing literacy by Tim Friedman, Sally Robertson, Stephanie Templeton and Maurice Walker is a Monitoring Trends in Educational Growth report published by ACER's GEM Centre.

LINKS

Read more about ACER's GEM research at www.acer.edu/gem

Read *Class 6 School Factors in Afghanistan 2013: The relationship between school factors and student outcomes from a learning assessment of mathematical, reading and writing literacy* at <http://research.acer.edu.au/mteg/13/>



Improving student learning in Mali

ACER has been working over the past two years to help develop an internal monitoring and evaluation system in Mali. **Petra Lietz** explains.

ACER through its Centre for Global Education Monitoring is working with Œuvre Malienne d'Aide à l'Enfance du Sahel (OMAES), a non-government organisation in Mali, to provide support for the development of an internal monitoring and evaluation system.

OMAES manages Bɛɛkunko, a household-based assessment of children's learning outcomes in literacy and numeracy for six- to 14-year-old children. The long-term aim of the work is to enable OMAES to evaluate the influence of its communication and advocacy activities, and policy impact, particularly in terms of Bɛɛkunko.

Bɛɛkunko: Citizen-led assessment

In partnership with other civil-society organisations, OMAES manages Bɛɛkunko, a citizen-led assessment program.

Through Bɛɛkunko, OMAES aims to motivate stakeholders at various levels to take action in schools and communities, and become engaged in education policy reform with the ultimate goal of improving student learning. Its main strategy is to improve awareness among stakeholders, particularly parents, about the actual learning outcomes of children in Mali.

Education decision-making responsibilities in Mali have been decentralised over time to various local and regional levels. As a result, local, regional and national stakeholders are increasingly important in education

reform and in monitoring actual learning outcomes and improving the quality of education.

Developing an evaluation approach

Since Bɛɛkunko is an ongoing assessment program, OMAES has identified the need to develop an evaluation approach and tools to enable ongoing data collection for evaluation purposes, and to inform future communication and advocacy activities.

OMAES and ACER collaboratively decided that a prospective evaluation approach would best suit OMAES's information needs. Using this approach, OMAES and ACER staff worked together to further refine stakeholder group definitions and develop measurable indicators for specific outcomes, as well as tools for data collection for the evaluation, and suggested sampling approaches.

The evaluation framework also included guidelines for data analysis and reporting, and data use. In addition, an evaluation schedule was proposed, with team members agreeing that the evaluation and monitoring system should be piloted before being upscaled to a greater number of Bɛɛkunko assessment regions in Mali.



Dr Petra Lietz is a Principal Research Fellow in ACER's Australian Surveys research program.

OMAES has now adapted this evaluation approach for three prioritised stakeholder groups:

- parents
- school management committees, and
- decentralised education committees at the commune level.

OMAES has administered surveys and conducted focus-group interviews to a sample of these key stakeholder groups in one region of Mali to pilot this evaluation approach, and its procedures and tools. OMAES plans to upscale the evaluation activities in 2017, after a review of insights from the pilot to a nationally representative sample of regions that have participated in Bɛɛkunko and to other stakeholder groups. ■

Further information

Measuring the impact of citizen-led assessments for improving the quality of education, by Petra Lietz and Mollie Tobin, is part of the Assessment GEMS series published by ACER's GEM Centre.

LINKS

The preliminary results of the stakeholder evaluation are available at www.oames.org

Read more about ACER's GEM research at www.acer.edu/gem

Read *Measuring the impact of citizen-led assessments for improving the quality of education* at <http://research.acer.edu.au/assessgems/11/>

Large-scale assessments in the context of developing countries

A new analysis of assessments around the world identifies how best to operate large-scale assessments in developing countries. **Ursula Schwantner** reports.



Ursula Schwantner is a Research Fellow in ACER's Assessment and Psychometric Research program.

Large-scale assessments in education such as the Programme for International Student Assessment (PISA) of the Organisation for Economic Cooperation and Development (OECD) assist governments in monitoring the outcomes of education systems in terms of student achievement.

Administered on a regular basis and within an internationally accepted common framework, large-scale assessments like PISA enable governments, education system leaders and practitioners to better understand how students are performing on a set of common tasks compared to students in other countries. They also help governments to understand and enhance the effectiveness of their

educational systems and to learn from other countries.

While developed countries have long participated in such international large-scale assessment programs, many developing countries have also identified the need for comparative data about their education systems and student outcomes.

Providing measures of education quality

Assessments like the OECD-initiated PISA for Development (PISA-D), the Progress in International Reading Literacy Study (PIRLS, PrePIRLS) and Trends in International Mathematics and Science Study (TIMSS and TIMSS Numeracy) by the International Association for the Evaluation of Educational Achievement, programs by the Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación (LLECE), Programme d'Analyse des Systèmes Éducatifs de la CONFEMEN (PASEC), and the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) seek to meet that need. But what are the key requirements if large-scale assessments are to

provide useful comparative measures of the provision of education quality in developed as well as developing contexts?

A new report from the Centre for Global Education Monitoring at ACER reviews major international, regional and national large-scale learning assessments. The report identifies effective assessment practices as a detailed reference for agencies in developing countries that are involved or plan to participate in international comparative large-scale assessments in education.

The report, *A Review of International Large-Scale Assessments in Education*, commissioned by the OECD and the World Bank, compares:

- component skills and cognitive instruments used in large-scale assessments
- contextual frameworks and instruments applied, and
- implementation models of international and regional assessments.

The report also reviews large-scale assessment programs that collect data about the achievement of school-aged



children who do not attend school, as well as ways in which data from the different assessments are used.

Consistency and comparability

The report makes a number of recommendations that support the development and maintenance of consistency and comparability in large-scale assessments to ensure that such assessments in general, and PISA-D in particular, generate useful information about student achievement and the effectiveness of educational programs.

This includes the recommendation that large-scale learning assessments, including those for developing countries, have an agreed framework to guide item development and test design, and to follow well-established procedures for the creation of new items. An appropriately targeted test and the description of proficiency levels will provide valuable information to education ministries in the participating countries.

Frameworks and instruments for collecting context data are also discussed. Such background data are of utmost importance to describe

and compare the contexts of learning, and to investigate the relationships between these contexts and student performance. Typically, large-scale assessments collect contextual information from students, school principals, teachers and parents. Especially in developing contexts where resources are low, careful consideration is required as to what types of questionnaires are implemented, in order to collect the most essential information in the most efficient way.

The report also points to the value of assessment approaches used in citizen-led, household-based assessments like the Annual Status of Education Report in India and Uwezo in Kenya, Tanzania and Uganda as a way to obtain information about children in the early years as well as school-aged children who do not attend school.

By identifying how best to operate large-scale assessments in developing countries, the report supports the efforts of governments and other agencies in monitoring efforts to provide inclusive and equitable quality education for all. ■

Further information

A Review of International Large-Scale Assessments in Education: Assessing component skills and collecting contextual data, by ACER's John Cresswell, Ursula Schwantner and Charlotte Waters, was produced with the support of the World Bank through its Russia Education Aid for Development Trust Fund program, as part of its contribution to the OECD PISA-D project and published by the OECD.

LINKS

Read more about ACER's education and development program at www.acer.edu.au/research/areas-of-research/education-and-development

Read *A Review of International Large-Scale Assessments in Education: Assessing component skills and collecting contextual data* by John Cresswell, Ursula Schwantner and Charlotte Waters at www.oecd-ilibrary.org/education/a-review-of-international-large-scale-assessments_9789264248373-en

Current international projects



Strengthening regional education assessment in Pacific countries

With support by the Australian Government's Department of Foreign Affairs and Trade, ACER is providing technical support for the Secretariat of the Pacific Community's Educational Quality and Assessment Programme (EQAP) to plan, administer and conclude all areas of work under its Strengthening Regional Education Assessment project. The work includes the development and administration of the Pacific Islands Literacy and Numeracy Assessment (PILNA) across 13 countries for students in Years 4 and 6; and the development of a long-term program of regional assessment for the Pacific to collect valid and reliable trend data. ACER is supporting EQAP with data analysis and

country reports for all PILNA participants as well as a regional report.

Technical consultancy on assessment in Indonesia

ACER is working with Cambridge Education to provide consultancy and technical support to Puspendik, Indonesia's national assessment agency, with funding through the Analytical and Capacity Development Partnership. Focusing on Indonesia's Year 12 examination system, the work includes conducting a series of workshops on item development, the evaluation of classroom-based assessment materials, the development of a strategy for computer-based testing and psychometric analysis of various large-scale survey datasets.

Supporting national student surveys in India

ACER is working with the United Kingdom Department for International Development, Cambridge Education and the National Council of Educational Research and Training (NCERT) through ACER India to provide technical support to the Rashtriya Madhyamik Shiksha Abhiyan National Achievement Survey at Grade 10 in India. The work includes the delivery of workshops for NCERT national staff, development of a handbook on large-scale assessment in India and production of a series of how-to-guides that support the National Achievement Survey.



Sector mapping of girls' education in Malawi

Supported by UNICEF, and working with the Malawi Ministry of Education, Science and Technology, ACER is conducting an overall education sector review of girls' education in Malawi, focusing on basic and secondary education. The situational analysis involves consultation with state and non-state stakeholders to identify and document who is doing what in girls' education. The aim of the review is to inform government planning and guide priorities for girls' education in Malawi.

Making a difference in Lesotho

ACER's Making a Difference program through the ACER Foundation is supporting schools in the Berea District of north-west Lesotho. The program

includes capital works funding to build school buildings and provide heating in classrooms. The program also includes funding for 33 vulnerable children in Makhalong Village to attend high school. Each of the 33 children is being voluntarily funded by an ACER staff member to complete their high school education.

Curriculum review in Indonesia

As part of the ongoing review and implementation process of the 2013 Indonesian curriculum, ACER is working in collaboration with staff from Puskurbuk (Centre for Curriculum and Books) at the Indonesian Ministry of Education and Culture to provide practical, evidence-based strategies to monitor, evaluate

and improve the Kindergarten to Year 13 (K-13) curriculum.

The project aims to translate research findings into effective curriculum implementation strategies and identify improvements to educational practices for Indonesian schools. Puskurbuk and ACER staff will work together to strengthen Indonesian capacity development through training workshops about tools for monitoring and evaluating curriculum changes, regional study tours to learn about successful curriculum implementation processes, and field tests of sample lessons for primary and junior secondary grades that will facilitate effective K-13 implementation. ■

Latest from **ACER** offices

ACER in Australia

ACER has built a strong reputation as a provider of reliable support and expertise to education practitioners and policymakers since it was established in 1930.

In Australia, ACER creates and promotes research-based knowledge, products and services pertaining to Australian education and – through international assessment programs – pertaining to education globally.

General enquiries: +61 3 9277 5555
www.acer.edu.au/form/contact

ACER in India

In India, ACER creates and promotes research-based knowledge, products and services pertaining to education in India and – through international assessment programs – pertaining to education globally.

ACER in India is providing ongoing support to the National Council of Educational Research and Training to design, implement and report a new National Achievement Survey of students in Class X; the World Bank-funded National Student Assessment for secondary school students in Bangladesh; and developing its book distribution capabilities, introducing

ACER titles addressing school improvement, teaching practices, assessment and reporting, and literacy and numeracy.

Key elements of the work program undertaken or delivered by ACER in India include:

- Teacher magazine
www.acer.edu.au/teacher-india
- Indian Progressive Achievement Scales <https://ipas.acer.edu.au>
- International Benchmark Tests
<https://ibt.acer.edu.au>

India enquiries: +91 11 4109 7433
india@acer.edu.au

ACER in Indonesia

In Indonesia, ACER creates and promotes research-based knowledge, products and services pertaining to education in Indonesia and – through international assessment programs – pertaining to education globally.

ACER in Indonesia is implementing major projects funded by the Analytical and Capacity Development Partnership to support the national examinations centre – Puspendik – in reforming the Year 12 examinations system; evaluating principal preparation for the Ministry of Education and Culture, and the Ministry



of Religious Affairs; and evaluating information and communications technology in education in Papua Province.

Key elements of the work program undertaken or delivered by ACER in Indonesia include:

- International Benchmark Tests
<https://ibt.acer.edu.au>
- Seminars addressing the assessment of thinking skills in association with Himpunan Evaluasi Pendidikan Indonesia (Indonesian Educational Evaluation Association)
- Research to build teaching capability and inform policymakers and leaders at the system and school level.

Indonesia enquiries: +62 21 293 05886
indonesia@acer.edu.au



ACER in the UAE

In the United Arab Emirates (UAE), ACER creates and promotes research-based knowledge, products and services pertaining to education in the UAE and – through international assessment programs – pertaining to education globally.

ACER in the UAE is implementing an International Association for the Evaluation of Educational Achievement eTIMSS pilot in conjunction with the Ministry of Education and Knowledge and Human Development Authority as well as an ePIRLS main study; managing the delivery and further development of the UAE National Assessment Program; and developing curriculum-specific versions of the Progressive Achievement Scales –

Middle East for schools following various national curricula in the UAE.

Key elements of the work program undertaken or delivered by ACER in the UAE include:

- International Benchmark Tests <https://ibt.acer.edu.au> and workshops
- International Schools Assessment <https://www.acer.edu.au/isa>
- delivery of the annual UAE National Assessment Program

UAE enquiries: +971 4 434 1904
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ACER in the UK

In the United Kingdom (UK), ACER creates and promotes research-based knowledge, products and services pertaining to education in the UK and

– through international assessment programs – pertaining to education globally.

ACER in the UK is supporting the UK Standards and Testing Agency in the development of three key stage mathematics item writing work packages; providing advice to the British Council on population definition and sample design for research on the English proficiency of students in about 20 countries; and continuing the development and delivery of the Essential Learning Metrics to schools across England.

Key elements of the work program undertaken or delivered by ACER in the UK include:

- Essential Learning Metrics <https://elms.aceruk.org>
- MSAP UK <https://msap-uk.acer.edu.au>
- uniNOW <https://uninow.acer.edu.au>

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